

## CLAIMS

1. A vacuum panel comprising a discontinuous or porous filling material (5) enclosed between at least two barrier sheets (6) mutually joined along the edges, characterized in that one or more rheophores (7, 7') suitable for electrically powering at least one device (1, 2, 3, 3', 4, 4') arranged inside the vacuum panel are gas-tightly arranged between the barrier sheets (6).
2. A vacuum panel according to claim 1, characterized in that the rheophores (7, 7') are formed of a conductive band comprising at least a conductive layer (8) enclosed between at least two insulating layers (9).
3. A vacuum panel according to claim 2, characterized in that the insulating layers (9) are mutually joined along the edges.
4. A vacuum panel according to claim 2 or 3, characterized in that the insulating layers (9) comprise one or more tapes of a polymeric material identical, similar or compatible with the material of the barrier sheets (6).
5. A vacuum panel according to claim 4, characterized in that the insulating layers (9) comprise a heat sealable tape of high density polyethylene (HDPE).
6. A vacuum panel according to one of claims 2 to 5, characterized in that the insulating layers (9) have a thickness comprised between 50 and 100  $\mu\text{m}$ .
7. A vacuum panel according to one of claims 2 to 6, characterized in that the conductive layer (8) comprise an aluminum tape.
8. A vacuum panel according to one of claims 2 to 7, characterized in that the conductive layer (8) has a thickness comprised between 4 and 10  $\mu\text{m}$ .
9. A vacuum panel according to one of claims 2 to 6, characterized in that the conductive bands (7, 7') comprise two polymeric films acting as insulating layers (9), at least one of which has a metallized surface which is comprised between said films and acts as a conductive layer (8).
10. A vacuum panel according to one of claims 2 to 9, characterized in that the conductive bands (7, 7') are sealed together with the edges of the barrier sheets (6) of the vacuum panel by means of heat sealing.
11. A vacuum panel according to one of claims 2 to 10, characterized in that one or both ends of the conductive bands (7, 7') are provided with pins (10, 11) for the

connection to devices arranged outside and/or inside the vacuum panel.

12. A vacuum panel according to claim 11, characterized in that the pins (10, 11) cross the conductive bands (7, 7') accomplishing an electric connection with the conductive layer (8).
13. A vacuum panel according to claim 12, characterized in that the pins (10, 11) are joined to clamps (13, 14) provided with tips which cross the conductive bands (7, 7') and are arranged between the borders (15, 16) of the conductive bands (7, 7') included between their ends and the same clamps (13, 14), which are folded and heat sealed onto the bands (7, 7'), so as to enclose and insulate the tips of the clamps (13, 14).
14. A vacuum panel according to one of the previous claims, characterized in that the device (1, 2, 3, 3', 4, 4') arranged inside the vacuum panel comprises a sensor for measuring the pressure (P) of the residual gases in the panel itself.
15. A vacuum panel according to claim 14, characterized in that the sensor comprises a housing (1) which is connected with the internal of the vacuum panel and encloses a wire (2) of conductive material suitable for being crossed by an electric current ( $I_2$ ) and becoming hot due to the Joule effect.
16. A vacuum panel according to claim 15, characterized in that the housing (1) is gas permeable.
17. A vacuum panel according to claim 15 or 16, characterized in that the housing (1) has a substantially cylindrical shape of diameter  $d_1 \gg d_2$ , where  $d_2$  is the diameter of the wire (2).
18. A vacuum panel according to claim 17, characterized in that the ends of the housing (1) are provided with two closing elements (3, 3') crossed by two conductive terminals (4, 4') wherein the ends of wire (2) are inserted so as to result taut in the middle of the housing (1) in a coaxial way.